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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,380	09/15/2004	Yen-Chang Tung	13464-US-PA	5379
31561	7590	11/23/2005	EXAMINER	
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE			CHANG, JOSEPH	
7 FLOOR-1, NO. 100			ART UNIT	
ROOSEVELT ROAD, SECTION 2			PAPER NUMBER	
TAIPEI, 100			2817	
TAIWAN			DATE MAILED: 11/23/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,380	TUNG, YEN-CHANG	
	Examiner	Art Unit	
	Joseph Chang	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Jelinek et al., US Patent 5,331,295.

Regarding claims 1 and 16, the Jelinek et al. reference discloses a VCO (Figure 1) comprising : a constant current source (12) for providing a reference current (12), a V-I converter (left transistor of 16) for determining a first current, input voltage (Vref), a current mirror (110 and right transistor of 16), a first current terminal (node of 12), a second current terminal (138), a first current (current through left side of 16), a second current (current through right side of 16), a third current (current through 138), an oscillating circuit (22). It is noted that the reference current 12 is the sum of the first current and the second current and because of current mirror, the third current (138) is approximately equal to the second current.

Regarding claims 3 and 4, Figure 1 shows the constant current source having input (up) and output (connection to the ground), the current mirror having right side of

P-type FET of 16 and 110 which is inherently P-type of FET and it's connections as recited in the claim because the reflection of Current Mirror 110 is a P-type.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jelinek et al. in view of Klughart.

Regarding claim 5, as discussed above, the Jelinek et al. reference discloses a VCO as recited in the claims including a V-I converter except the V-I converter being a P-type of transistor. As would have well known in the art, transistors of N-type or P-type are interchangeably used based on the circuit design preference and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use p-type of transistor at the left side of 16 in Jelinek et al. because such a modification would have been a mere substitution of an art recognized equivalent transistor.

Regarding claim 6, having a transistor where its body is coupled to the source is well known in the art, for example, Klughart teaches such configuration that used in generation of reference voltage and current because it is immune to changes in temperature and operating supply voltage, and therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use such transistors because such a modification would have provided the benefit as stated above.

Regarding claim 7, having a resistor where the transistor is coupled to the power supply would have been obvious to one of ordinary skill in the art at the time of the invention based on the consideration of limiting the power supply current to the transistor for desired operating conditions.

Regarding claim 8, having an op-amp where input of the transistor is coupled would have been obvious to one of ordinary skill in the art at the time of the invention based on the consideration of buffering input signal to the transistor for desired operating conditions.

Regarding claim 9, having another P-type transistor connected in series would have been obvious to one of ordinary skill in the art at the time of the invention based on the consideration of current boosting for desired operating conditions.

Regarding claim 2, having a wave shaping circuit coupled to the oscillator would have been obvious to one of ordinary skill in the art at the time of the invention based on the consideration of shaping of the oscillation output for desired operating conditions.

Regarding claim 10-15, the structures as recited in the claims 1-9 except using N-type of transistors with their intended connections would have been obvious to one of ordinary skill in the art at the time of the invention because such a modification would have been a mere substitution of art recognized equivalent transistors.

The Official Notice is taken because the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Burt shows operational amplifiers for input buffering.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Joseph Chang
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